Harold:

29 March 69

It's marning, and I am fresh as Spring rain. I want to explain what may be the significance of Frazier photographing only the dented primer, and not the brass base of the cartridge case. I mentioned last night that Cunningham photographed both in connection with his study of the revolver cartridges (.38 Special).

Again I caution that I cannot be absolutely certain about this until I see test results of fired rifle cases-- the more, the better. Until then, regard this as tentative, but theoretically very, very likely.

When ~~xxxxxxxxx~~ the powder in a cartridge is ignited by the blasted primer, tremendous pressure is exerted in all directions by the gasses released from the burning powder. The bullet is the only thing that "gives" in response to this pressure, and it is driven along the only available path, the rifle barrel. The walls of the cartridge case are blasted outward against the inside of the rifle chamber, but the chamber doesn't "give", so the case remains intact.

Moreover, at the same time, the base of the cartridge is blasted backward, and rams the bolt face of the rifle (Breech face of revolver) with such tremendous force that base of the cartridges is impressed with the marks that appear on the bolt face. That is, ~~xxxx~~ imperfections ~~xxxxxxxxxxx~~ of the bolt face (like tiny mountains) are stamped on the brass base of the cartridge. It is these marks, and marks on the firing pin, that make positive identification possible. Under those pressures, brass yields to steel like butter yields to anything harder. The marks are unique; they are like the "fingerprints" of the rifle.

Undoubtedly, bullets were fired out of the revolver cartridge cases that Cuningham examined. Marks from the breech face of the revolver are clearly discernable on the cartridge bases. The breech face and the firing pin left their "prints" on the brass and primer.

It is not certain, however, whether the rifle left its "prints" on the brass of the cartridge cases, for Frazier discusses only the marks on the firing pin. There is no doubt that the firing pin of the rifle struck the primers of the rifle cartridges. But there is considerable doubt whether there were bullets in the cases when the primers were blasted. Without bullets in the cartridges, the cases are not blasted backward; the primer pops, and that is it.

I have not yet looked up and determined the exact pressure inside 38 Spl. cases when they are fired, but I ~~xx~~ can tell you now that it is far, far less than the pressure of the 6.5 M-C, which is 37,000 psi. With bullets in them when fired, the ~~xx~~ rifle cases ram the bolt face with much more massisve force than revolver cases ram against the breech face. Consequently, the rifle cases should be much more extensively and clearly imprinted by the bolt face than revolver cases are imprinted by the breech face. There is no doubt about that.

(turn page over)

offhand, I guess the pressure of .38 Spl. is about 10,000 psi.

This explains, perhaps, why Frazier did not testify regarding impressions on the brass of the rifle cartridge cases. I think that he did not find the impressions that he should have found. Undoubtedly, the bolt marked the cartridge base when it cast the cartridge into the chamber (brass yields to steel), but that is a different set, and a different type, of marks from the ones that I described.

If I am right (and I will lay a dollar over a penny that I am) then this completely casts the M*C from consideration as one of the murder weapons. The only condition under which that rifle can have been used in the assassination is if other cartridges were fired in it than the ones that were left by the window - which is an insane conjecure.

What is more important, it clears Oswald completely and makes him look like the poor patsy that he was.

I am atwitter with enthusiasm over this, for unlike the piece on the scope sight, which does not concern the assassination, this bears directly on the assassination, and in a very important manner.

I'll begin writing this as a report after I learn test results.

Dick

Bernabei

P.S. Much of Frazier's testimony comes into consideration in this regard, but <u>especially</u> the following (3H 423):

EISENBERG. Were you able to find identifying marks on the brass as well as the primer on this cartridge case (i.e. CE543)?
FRAZIER. No; I did not notice any marks on the brass portions outside of the primer.

Frazier then describes this a "typical", but that is not true, as the testimony on Cunningham on the revolver cartridges indicates.